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*THE STANLEY-McCORMICK HOPI EXPEDITIONS.\**

IN 1897 the Hopi collections of the Field Columbian Museum were comprised within three cases and consisted chiefly of a gift from Mr. Ayer, supplemented by a small collection purchased from Mr. Keam, a Hopi trader. During this year I made an extended collecting trip through a number of the Western States, visiting on my return the Hopi pueblos, where I remained five days, which were spent in collecting ethnological material. From several sources, previous to my visit, I had heard of a collection which the missionary Mr. H. R. Voth had been forming during a number of years, to assist him in his studies. While examining this collection I was at once impressed not only with its great beauty and richness, but with the detailed knowledge which Mr. Voth possessed concerning every object in his collection. At that time there was no willingness on his part to sell any or even a portion of the collection, and in fact its sale was not even seriously considered.

In December, 1897, I revisited Oraibi, the largest of the Hopi villages, in company with Mr. Melville, an attaché of the department as modeler and sculptor. The object of this visit was to secure life casts of several Hopi for the production of a large group which would illustrate certain phases of their house life. Mr. Voth had in the meantime enlarged his collection, and I was more than ever brought to a realization of the value of its accession for our Museum. I returned to Chicago with the idea that we should secure the Voth collection, as well as the services of Mr. Voth that he might arrange the collection and construct certain altars, etc., illustrative of the religious life of the Hopi.

Shortly after my return I consulted with Mr. Ayer in regard to the matter, and it was

through his interest in the Museum that the subject was brought to the attention of Mr. Stanley McCormick, who, in January, 1899, notified me that he would contribute a certain sum toward the work, as had been outlined by me. Within a few days after this announcement of McCormick's intention, Mr. Voth arrived at the museum and began work, continuing with the museum uninterruptedly until May 1, 1900, when he left for Oraibi again to assume his duties as missionary. During Mr. Voth's connection with the museum his entire collection was installed, nine altars, involving an immense amount of detailed labor, were constructed, and over 1,700 labels were written. While Mr. Voth had never had previous experience in museum work, his natural ability was so great, his knowledge of the subject so profound and his earnestness so intense, that a great deal of work was accomplished in that time, and it was with no little degree of regret that I saw Mr. Voth leave for his field of work as missionary.

While the collection acquired from Mr. Voth contained a large amount of ancient pottery, yet the major part of the collection was purely ethnological, and it soon became evident that if we were to derive full benefit from the opportunities which presented themselves in Arizona for a complete exhibit of a single tribe, we must at once set about to secure a proper representation of ancient Hopi life, as remained concealed within the ancient house ruins and burial places. Much archeological investigation of this sort had already been carried on by other investigators, especially by Dr. Fewkes of Washington, who for many years had devoted much time to this work and always with consummate success. I decided, therefore, that while attempting to make our collection representative of all parts of the territory covered by the ancient Hopi, we should pay especial attention

\* Read before the Chicago Society of the Archeological Institute of America, December 18, 1900.

to the ruins which heretofore had been lightly passed over; especially was it my desire that we might discover new ruins where yet remained interesting material. In accordance with this idea Mr. Burt, an assistant in the department, left Chicago early in December of 1899, and began a series of explorations in the well-known ruins of Homolobi near Winslow, on the Little Colorado River. He pushed on to the west, following the course of the river, and investigating one ruin after another for a distance of seventy-five miles. The result of this expedition was that our knowledge of the Hopi was considerably extended in a hitherto unexplored region, which was occupied by several clans, where the manufacture of the so-called yellow ware of the Hopi had not been practised. In none of the ruins explored by Mr. Burt beyond the point known as Cable Crossing, did he encounter any of this so-called yellow ware, but large quantities of other ware, the black and white predominating. About the same time that Mr. Burt left for the Little Colorado, Mr. Voth and I left Chicago for Oraibi, where we spent a little less than a month. The object of this—the second McCormick expedition—was not so much to secure material as to get additional information regarding certain altars. In this we were entirely successful, and while there had the good fortune to witness the nine day Soyal or Winter Solstice ceremony. Full notes were taken on this interesting ceremony and it will form the subject of a Museum publication shortly forthcoming. A number of interesting objects were also added to the collection on this expedition, of special interest being a number of masks and certain *tihus* or dolls which had never before been reproduced for the purpose of trade. Early in the present year, Mr. McCormick's attention was called to the fact that additional funds would be needed if the work was to be carried on, and he very

generously announced his intention of making provision for the continuation of the work and above all for an extension of archeological investigations among the ruins.

Early in May of this year I again sent Mr. Burt, on the third McCormick expedition, to the Lower Colorado, in order that the work which had been abandoned on the previous year, on account of the setting in of winter, might be continued. Mr. Burt continued his explorations on into the country of the lower Little Colorado river, reaching on this occasion Black Falls. As a result of this expedition many additional specimens, including a large number of turquoise beads, implements, utensils and ornaments of stone, bone and shell were secured, as well as a number of skeletons which will prove of the greatest value when the time comes to attempt to reconstruct the past life of the Hopi, so far as relates to their physical characteristics. It is only just to Mr. McCormick to say that he very generously made special provision for this second expedition of Mr. Burt's. The fourth and last McCormick expedition has just terminated after a period of eight months; this was in charge of Mr. C. L. Owen, also an assistant in the department, who left Chicago early in May. Mr. Owen confined his attention to the ruins located within the limits of the so-called Province of Tusayan, and the first five months of his time were spent in excavating at the great ruins of Sikyatki, Awatowi, old Mishonovi and old Cunopavi. All these ruins were well-known to scientists, and from many of them collections of considerable importance had been made, but so valuable are they for the purpose of reconstruction of the past history of the Hopi that it was considered especially desirable to form as large a collection as possible from each one. In this Mr. Owen was entirely successful, finding a hitherto unknown burying ground at

Sikyatki which yielded important results, and from Mishonovi—one of the most important of the Hopi ruins—securing over 600 pieces of decorated pottery alone, while from other regions he secured representative collections. Having exhausted the region in the immediate vicinity of the present Hopi villages he turned his attention to ruins of the North, many of which had never been previously visited by any scientist. While in this region he discovered ruins which we have reason to believe had never been seen by any white man. As a result of this expedition the Museum acquired nearly three thousand invaluable specimens, comprising every object which we might reasonably expect to find in graves or house ruins, and including a large number of rare forms of bahos or prayer offerings. Many unusual forms of stone implements, idols, and mask forms were found, while especially noteworthy are four painted stone slabs which probably once served in some Hopi altar and of which specimens have rarely ever before been found. Concerning the exact value of the contributions which may be made to science as a result of this last Hopi expedition it is of course too early yet to speak, but that our knowledge of the Hopi and of their migrations has been extended in many ways there is no question.

Finally there may be considered the contents of the two halls in the Field Columbian Museum devoted to the Hopi, for here, it may be properly assumed, are the visible, tangible results of these McCormick expeditions. Of the thirty-four cases which contain these collections, eleven are devoted to the ordinary every-day life of the Hopi. Here we may trace in detail, by means of thoroughly labeled specimens, models and three life-like groups, the domestic life of the Hopi through every phase of industry—such as pottery-making, basketry, spinning and weaving, costumes,

stone and bone utensils of various sort, etc. In the same room with these domestic collections are to be found several cases containing such of the material from ancient ruins as has been put on exhibition. These collections, however, it is to be expected, will be removed from this hall and shown in an adjoining hall along with collections which have been derived from the last two expeditions and which may be derived from further expeditions.

Much might be said of the interest attaching to the numerous specimens which these expeditions have yielded, but attention can only be directed to a single group of objects, namely, the yellow ware food bowls. Each one of these bowls is beautifully made (in fact no finer pottery has been found in America) and they are generally decorated on the interior with certain mythological figures or symbols. Among these bowls are very few duplicates, each one having its own story, having served during the life of its owner its own peculiar mission.

The second Hopi room is devoted to ceremonies and to the religious life in general of the Hopi. In this hall no distinct phase of the ceremonial or religious life has been omitted, and simply to show the fullness and richness of the collection, mention may be made of two or three categories of objects. While the Hopi are not greatly addicted to smoking, yet the use of tobacco forms a very important part in all of their ceremonies, and, for the production of smoke which shall symbolize clouds, special forms of pipes are used, known as cloud blowers. In other ways also during ceremonies pipes of special construction or design are used. The collection numbers over sixty interesting and carefully labeled specimens of pipes, many of which are extremely rare forms. During the ceremonies many forms of bahos or prayer messengers are used, and as these bahos are not made

for the purpose of trade, but as a rule are immediately after consecration deposited in shrines or springs, they are rather difficult to obtain, yet the collection numbers over 150 specimens of these interesting objects, representing nearly every form of *baho* known to the Hopi.

The figurines produced by the Hopi men and given by the mothers to the children during the *Niman*, or Farwell ceremony, and known as *tihus*, are objects found in all Hopi collections, but as a matter of fact these *tihus*, which represent certain mythological personages called *Katcinas*, are only reproduced for a limited number of characters. Owing to the unusual zeal shown by Mr. Voth toward the collection of this class of objects, the collection, with the recent addition of specimens brought home by Mr. Owen, numbers not less than 275, comprising over two hundred distinct varieties, a great many of which were reproduced for Mr. Voth only after earnest endeavor on his part. Inasmuch as these *tihus* represent *Katcinas* and as these *Katcinas* play a very important part in the religious life of the Hopi the importance of a collection of this magnitude, carefully arranged and labelled, can not be overestimated. Even more difficult than these *tihus* to obtain are the masks which are worn by the Hopi as they personate deities in the *Katcina* dances. The Hopi regard these masks with considerable reverence and do not willingly part with them, yet the collection numbers one hundred and thirty specimens, many of them being made of elk or buffalo hide.

But more important than these collections, however valuable and interesting, are the altars and sand mosaics, which are faithful, painstaking reproductions of altars which are erected year after year in the underground *kivas* of the Hopi. There may come a time when the actual altars themselves may be obtained, but up to the

present, so highly are they revered by the Hopi that no sum of money, however great, would induce them to part with a single slab from a single altar. The altars reproduced by Mr. Voth number nine, namely—the Antelope, Snake, Flute, Powamu, Powalawu, Katcina, Soyal, Marau and Oöquol. These altars are such as are erected by the Hopi during the great nine-day ceremonies, and while they do not exhaust the subject for even a single Hopi village, they are by far the most important altars and comprise within their number all those which contain images or fetishes. In most of the ceremonies represented by these altars, during the years when initiations are performed, sand mosaics are added to the altar, and comprised within the altars which have been reproduced are all those which contain this additional feature of interest. Mr. Voth also reproduced the great Ballülukon screen which is erected in the *kiva* during one of the ceremonies, and which is manipulated by means of concealed wires, to the intense delight of priests and the great mystification of the novitiates present.

The work which has been accomplished by the McCormick expeditions up to the present time has, I believe, been thorough and in every sense worthy the generosity of the patron. It must be admitted, however, that much yet remains to be done of equal value and importance among the Hopi of to-day and among the ruins of the past.

GEORGE A. DORSEY.

FIELD COLUMBIAN MUSEUM.

#### SCIENTIFIC BOOKS.

*An Atlas of Representative Stellar Spectra from  $\lambda$  4870 to  $\lambda$  3300*, together with a Discussion of the Evolutional Order of the Stars, and the Interpretation of their Spectra, preceded by a Short History of the Observatory and its Work. By SIR WILLIAM HUGGINS and LADY HUGGINS. London, William Wesley & Son.